



Questions & Answers: Champaign, Illinois, Manufactured Gas Plant Site Project Update Fact Sheet – January 2008

Ameren has completed the latest phase of an environmental investigation of property it owns at 308 N. Fifth Street, at the Hill Street intersection. A manufactured gas plant operated at this location from about 1869 until the early 1930s.

The Illinois Environmental Protection Agency (Illinois EPA) is overseeing the project through its Voluntary Site Remediation Program. In December, Ameren submitted the Comprehensive Site Investigation Report to the Illinois EPA for review. The latest phase of the investigation found gas production byproducts, which are primarily coal tar, beneath the ground surface. These findings indicate additional cleanup will be needed at the site.

While the byproducts contain chemicals that may pose a health risk if people come into direct contact with them over a long period of time, the investigation concluded that there are no concerns about immediate exposure. Ameren is working with the Illinois EPA to reduce the potential for people to become exposed to these chemicals in the future.

This fact sheet provides information about manufactured gas plant operations and their by-products and residues, summarizes the report and discusses the next steps in the project.

Q: What are manufactured gas plants?

A: Manufactured gas plants (MGPs) produced gas from coal or oil for lighting, heating and cooking during the era prior to the availability of natural gas from interstate pipelines. Manufactured gas plants were active in Illinois from about the mid-1800s until the 1940s.

Q: What is the history of the Champaign manufactured gas plant property?

A: Ameren predecessor companies produced gas from coal and oil on the property. The manufactured gas was stored in large, cylindrical above-ground holders before distribution to the community. Between the 1930s and early 1950s, the plant was used only occasionally to supplement natural gas. Most of the plant structures were removed from the property in the late 1950s, except for the booster house. An American Legion post used this building between 1979 and 1991, when Illinois Power reacquired the property.

Q: What residues were created during the gas manufacturing process?

A: As with many industrial processes, gas manufacturing produced residues. Coal tars, coke, and ash were the primary residues of the gas manufacturing process. Both the coal tars and coke were valuable byproducts. Coke was the remaining portion of the coal after the process used to manufacture gas was complete. Byproduct coke was used as a heating fuel at the manufactured gas plant and was sold to others. Coal tars also served as a fuel for heating the plant and had market value. The tars were sold to the chemical industry for the manufacture of dyes, explosives, medicines, and perfumes and for use in creosote (wood preservative) and road tar. Today, coal tars are found in soaps and shampoos for dry skin and scalp, driveway sealers and a variety of dyes, drugs and paints.

Q: What are coal tars?

A: Coal tars are thick, black, brown or red-brown opaque liquids or solid materials produced during the gas production process. Coal tars contain a number of chemically distinct compounds. Polycyclic aromatic hydrocarbon compounds, or PAHs, are one class of chemicals in coal tars. PAHs are produced in combustion processes, such as burning coal, oil and wood and, therefore, are widespread in the environment. Today, PAHs are found in many roofing materials, wood preservatives, asphalt paving and pavement sealers. Another class of chemicals found in coal tar are known as volatile organic compounds (VOCs). They evaporate easily into the open air, but could exist for a long time underground. Some of these volatile chemicals are found in gasoline and in many petroleum-based consumer products.

Q: Is there anything in the residues to make them harmful?

A: There are many different chemical compounds in gas plant residues. Some compounds in coal tars, coke and ash may produce health problems, ranging from minor to more serious. For example, some PAHs can irritate the skin and nose and throat, and high levels of or prolonged exposure to VOCs can cause nausea and headaches. Scientists have determined that frequent or daily exposure in a work setting to some PAHs and VOCs can pose an increased risk of cancer.

Q: Does the gas plant site in Champaign pose a risk to local residents?

A: The site presents no immediate health threat to the public. While the residues contain some chemical compounds that could pose a health risk in certain circumstances, the degree of risk depends on the potential for people to be exposed to them at levels that could be harmful.

An environmental investigation looks at how people could come in contact with residues and/or impacted soil and water. Possible routes of exposure include skin contact and inhaling or swallowing (ingesting) the substances. There has been little potential for extended contact with buried materials at the Champaign site. While there are impacts to groundwater which will be addressed, no one is using this groundwater. The site and surrounding area are served by the Illinois-American Water Company. The public water supply comes from wells which are a mile or more away from the site, and they are not affected by the MGP site.

Q: What work has been performed as part of the environmental project?

A: Environmental engineering firms under contract to Ameren and Illinois Power, which Ameren acquired in 2004, investigated soil and groundwater conditions in several phases at the property and in areas on all four sides of our property. Studies were performed in 1986, 1990, 1992 and 1997.

Tarry residues were found underground in the vicinity of old plant structures, and laboratory analyses of soil and groundwater samples detected chemical compounds typically found at former manufactured gas plant sites.

In the winter of 1997-98, Illinois Power removed tar and other materials that were a major source of the soil and groundwater contamination. Philip Environmental Services Corp., under contract to Illinois Power, performed the work in accordance with an Illinois EPA-approved work plan and an air monitoring program. The contractor excavated tar and other residual material from structures that remained below the property, backfilled the areas and restored the surface with gravel, topsoil and grass.

In order to meet Illinois EPA's revised requirements for cleaning up contaminated properties, in summer 2004, the contractor returned to the site to further investigate the northern portion of the manufactured gas plant site and adjacent property to the north and east. Workers used boring equipment to collect soil samples and a backhoe to excavate areas where former gas manufacturing structures had been located. As with previous investigations, the air was monitored for vapors and dust whenever this work was being performed to protect the workers and neighborhood residents.

Q: What are the major findings of the site investigation report?

A: Major conclusions of the report are:

- There are impacts to soil on the Ameren property from historic manufactured gas operations that will require additional cleanup (remedial) work.
- There are impacts to shallow soil offsite to the north and northwest that are unrelated to manufactured gas operations.
- The manufactured gas-related impacts to soil offsite to the north and northwest are at least three feet below the ground surface.
- The groundwater has been impacted; however, no one is using this groundwater.
- The additional cleanup will address the manufactured gas impacts to soil and groundwater.
- Further investigation will be needed to confirm potential off-site contamination.
- While no immediate exposure concerns have been identified, Ameren will work with any affected property owners to address manufactured gas impacts to their property.

Q: What are the next steps in the Champaign MGP site environmental project?

A: Ameren's goal for this former industrial site is to restore it to meet the state's environmental objectives.

Early 2008 - The former manufactured gas plant site project is being carried out under the procedures of the Illinois Site Remediation Program. We anticipate the Illinois EPA will review the investigation report and return comments to Ameren in early 2008. It is possible the Illinois EPA may require additional investigation work at the site.

Mid-2008 - The next step will be for Ameren to submit to the Illinois EPA for review the Remedial Objectives Report. This document describes the goals that remedial actions will need to meet to make sure the site is safe to use and protects the environment and public health over the long term.

Late 2008 - Once the Illinois EPA accepts the remedial objectives, Ameren will submit a Remedial Action Plan for review. Some of the remedial activities that will be considered as we develop the plan are removing impacted soil, treating it to contain it below ground and installing a protective cover, such as asphalt or clean soil. If major excavations are necessary, Ameren would perform this work under the protection of a temporary tent-like structure. The plan will take into account the continued nonresidential use of the property and is likely to consist of a combination of actions.

Q: Does Ameren have any experience in dealing with manufactured gas plant sites?

A: Yes. Ameren has completed successful studies and cleanups of manufactured gas plant sites in at least 20 locations in Illinois and Missouri.

Q: How may people in the community ask questions and offer opinions about this project?

A: Ameren is committed to open communication with those interested in the project. We have placed a collection of documents associated with the project in a **Site Information Repository** located at the Douglass Branch of the Champaign Public Library at 504 E. Grove Street. The telephone number of the library is 217-403-2090. Library hours are Monday – Thursday 10:00 AM until 8:00 PM, Friday 10:00 AM until 6:00 PM, Saturday 10:00 AM until 4:00 PM.

The Champaign City Building, located at 102 N. Neil Street, is open from 8:00 AM to 5:00 PM weekdays, unless otherwise posted. The report and fact sheets may be reviewed at the Information Desk located in the Atrium Lobby. If you have questions or the desk is temporarily un-staffed you may inquire at the Neighborhood Service Department in the same building or call 217-403-7070.

Additional inquiries about the project can be made by calling Mr. Leigh Morris with Ameren at 217-535-5228 or by e-mail at Lmorris@ameren.com.

Inquires regarding Illinois EPA's oversight of this project can be made by contacting Stan Black at 217-785-1427 or by e-mail at stan.black@illinois.gov His mailing address is Office of Community Relations, Illinois Environmental Protection Agency, PO Box 19276, Springfield, IL 62794-9276.